

## One plant, many controversies: Uncovering the cover of marijuana

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### ABSTRACT

**Background:** The legalization of medical use of marijuana has generated intense debate globally, balancing between the therapeutic potential and concerns over abuse. Over the years, cannabinoids have demonstrated potentials in the treatment of certain ailments, controversies persist regarding the safety, standardization and regulatory challenges.

**Objectives:** This review aims to critically examine the historical perspectives of the use of marijuana, with a focus on its medicinal uses and also looking at regulatory challenges in West Africa, and specifically in Nigeria.

**Methods:** A systematic literature review was conducted using databases. Peer-reviewed articles, policy documents were reviewed and analysed.

**Results:** This study revealed that while medical marijuana demonstrates clinical benefits from the beginning of mankind, policy differences contribute to the confusion and thus, hindered medical use.

**Conclusion:** Medical marijuana holds considerable therapeutic promise but remains controversial due to gaps in scientific evidence, ethical dilemmas, policy inconsistencies and cannaphobia.

**Keywords:** Medical marijuana, Cannabis, Tetrahydrocannabinol, Cannabidiol, Therapeutic use, Regulation

## Une plante, de nombreuses controverses : levée du voile sur la marijuana

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### RÉSUMÉ

**Contexte:** La légalisation de l'usage médical du cannabis a suscité un vif débat à l'échelle mondiale, entre potentiel thérapeutique et les préoccupations liées à l'abus. Au fil des ans, les cannabinoïdes ont démontré leur potentiel dans le traitement de certaines affections, mais des controverses persistent quant à leur innocuité, leur normalisation et les défis réglementaires.

**Objectifs:** Cette étude vise à examiner de manière critique les perspectives historiques de l'utilisation de la marijuana, en mettant l'accent sur ses utilisations médicinales et en examinant également les défis réglementaires en Afrique de l'Ouest, et plus particulièrement au Nigéria.

**Méthodes :** Une revue systématique de la littérature a été réalisée à partir de bases de données. Des articles évalués par des pairs et des documents de politique générale ont été examinés et analysés.

**Résultats:** Cette étude a révélé que même si la marijuana à usage médical présente des avantages cliniques depuis le début de l'humanité, les différences politiques contribuent à la confusion et entravent ainsi son utilisation médicale.

**Conclusion:** La marijuana à usage médical présente un potentiel thérapeutique considérable, mais reste controversée en raison des lacunes dans les preuves scientifiques, des dilemmes éthiques, des incohérences politiques et de la canna-phobie.

**Mots-clés:** Marijuana à usage médical, cannabis, tétrahydrocannabinol, cannabidiol, usage thérapeutique, réglementation

## INTRODUCTION

Marijuana, also known as Cannabis, is a plant-based substance containing psychoactive compounds, particularly Tetrahydrocannabinol (THC) and Cannabidiol (CBD). Evidences abound on its use as recreational, medicinal and therapeutic agent; which dates to ancient civilization. The use of cannabis for purposes of healing predates recorded history.<sup>1</sup>

### Historical perspectives

The earliest written reference is found in the 15th century BC Chinese Pharmacopeia. Archaeologists unearthed traces of cannabis with high levels of THC in wooden bowls dating to 500 BCE in the Jirzankal Cemetery in China, marking the earliest instance of marijuana use found to date.<sup>1,2</sup> This particular use of marijuana was more likely for a religious rite than medicinal purposes, though religion and medicine were not necessarily kept separate.

The mythological Chinese Emperor Shen Nung- also known as Chen Nung- considered as the Father of Chinese medicine developed a pharmacopoeia, Treatise on Medicine (which itself has disputed dates-2737 BCE or 1CE and unknown authorship); which indicated marijuana as a treatment for more than 100 ailments including malaria, constipation, rheumatic pains, 'absentmindedness' and 'female disorders'.<sup>3</sup> From China, marijuana was introduced to Iran and Anatolia by the Scythians and then spread to India, Greece, Egypt and throughout Africa. Evidence suggests that Arab physicians used marijuana for pain, inflammation, and epileptic seizures, while in India marijuana was used for fevers, sexually transmitted infections (STIs), headaches, sleep, dysentery, digestion and appetite inducement. In Rome, Emperor Nero's private physician, Pedanius Dioscorides (circa AD 40-90), a Greek physician, used the plant to treat pain in ears; he stated bluntly that the plant which was used in the making of rope also produced a juice that was used to treat earache and suppress sexual longing. Marijuana was similarly used in Africa, as evidenced by the Egyptian Ebers papyrus (circa 1550 BCE), for fever, pain, infected toenails and uterine cramps. Cannabis pollen is found on the mummy of Ramesses II, who died in 1213 BC. Other Egyptian papyruses include cannabis as treatment for eye infections (perhaps glaucoma), cholera, menstrual ailments as well as 'cooling the uterus', headaches, schistosomiasis, fever and colorectal cancer.<sup>4,5</sup>

The Moors brought marijuana to Spain during the 8th-

century occupation. The Spanish, in turn, took marijuana to the Americas where it was mainly used as a cash crop for producing hemp fiber. Medical use followed quickly, with Mexicans using the drug for gonorrhea, menstrual ailments, pain and toothaches.<sup>6,7</sup>

Marijuana (*Cannabis sativa*) is one plant with controversy, multiple and divided history right from the creation of mankind! In the Holy Bible, "Holy anointing oil" passed from God to Moses, as described in the original Hebrew version of the recipe, contained *kaneh-bosem*,<sup>8</sup> a substance identified by respected etymologists, linguists, anthropologists, botanists and other researchers as cannabis. Not to sound blasphemous, it was speculated further and significantly too, that priests and prophets use the anointing oil to see and speak with God- a spiritual upliftment!

The controversies on its medicinal multiplicity are increasing. Residues of some plant materials from Stratford-upon-Avon (birth place of William Shakespeare) and its environs, dating to the early 17th century, showed Cannabis was excavated from the garden of William Shakespeare. The researcher (unpublished manuscript) suggests that Shakespeare preferred Cannabis as a stimulant which had mind-stimulating properties.<sup>9</sup> English Clergyman and Oxford scholar Robert Burton heralded the arrival of marijuana in medieval Europe, and suggested cannabis as a treatment for depression in his influential and still popular 1621 book *The Anatomy of Melancholy*.<sup>10</sup> George Washington's diary entries indicate that he grew hemp at Mount Vernon, his plantation, for about 30 years (approximately 1745-1775).<sup>11</sup> According to his agricultural ledgers, he had a particular interest in the medicinal use of Cannabis, and several of his diary entries indicate that he indeed was growing Cannabis with a high Tetrahydrocannabinol (THC) content. Similarly, Thomas Jefferson did grow hemp- as noted in his farming diaries from 1774-1824.<sup>12</sup> Napoleon Bonaparte, invaded Egypt and brought back cannabis to France in 1799. The cannabis was investigated for its pain relieving and sedative effects and became more widely accepted in Western medicine.<sup>13</sup>

Cannabis was reintroduced into British medicine in 1842 by Dr. William O'Shaughnessy, an Irish professor who had served in India, in the treatment of convulsion, tetanus and rabies.<sup>14</sup> It is said to have been used by Queen Victoria against period pains: there is no actual proof of this at all, but Sir Robert Russell, for many years her personal physician, wrote extensively on cannabis, recommending

it for use in dysmenorrhoea (menstrual cramps).<sup>15</sup> It was administered by mouth, not by smoking, but usually in the form of a tincture (an extract in alcohol). Cannabis extracts were also incorporated in many different proprietary medicines. In the 19th Century, marijuana emerged as a mainstream medicine in the West. Studies in the 1840 s by a French doctor (Jacques-Joseph Moreau) found that marijuana suppressed headaches, increased appetites, and aided people to sleep.<sup>16</sup>

By 1850, marijuana had made its way into the United States Pharmacopeia-setting authority for all prescription and over-the counter medicines, which listed marijuana as treatment for numerous afflictions, including: neuralgia, tetanus, typhus, cholera, rabies, dysentery, alcoholism, opiate addiction, anthrax, leprosy, incontinence, gout, convulsive disorders, tonsillitis, insanity, excessive menstrual bleeding, and uterine bleeding, among others. Patented marijuana tinctures were sold.

In 1889, an article by Dr. E. A. Birch in *The Lancet*,<sup>17</sup> then as now one of the world's leading medical journals, outlined the application of cannabis for the treatment of opium and chloral hydrate withdrawal symptoms: the mixture reduced the opium craving and acted as an anti-emetic. Concern about cannabis as an intoxicant, led the government of India to establish the Indian Hemp Commission of 1893 - 1894 to examine the question of cannabis use in India. In the United States of America (USA), the legislature banned Cannabis amidst profusion of vices, not due to any widespread use or concern about cannabis, but as regulatory initiatives to discourage future use. Later, a legislator in 1913 introduced three bills in 1913 (though not on Cannabis) to remedy the drug problem by controlling the domestic manufacture and by regulating the international trade. President Woodrow Wilson signed all three measures into law in 1915.<sup>18</sup> Although it does not apply to marijuana, the Harrison Act becomes the model for drug regulation on the federal level and is considered the basis for the Marihuana Tax Act of 1937.

Fast forward the information, the demand for marijuana-based medications accelerated, pharmaceutical firms attempted to produce consistently potent and reliable drugs from Cannabis. By the 1930 s at least two American companies (Parke Davis and Eli Lilly) were selling standardized extracts of marijuana for use as an analgesic, an antispasmodic and a sedative. Another manufacturer, Grimault and Company, marketed

marijuana cigarettes as a remedy for asthma. Marijuana, was largely misrepresented, but might have important uses in medicine. Here too, debaters prefer the word Cannabis than Marijuana; Cannabis describes the plant and its products. While marijuana remains a word in cultural and social context, that relates to the use of Cannabis preparations for smoking.

Tetrahydrocannabinol (THC), a main psychoactive component of cannabis was identified in 1964 by Raphael Mechoulam, Professor of Medicinal Chemistry at the Hebrew University of Jerusalem, he is also the first to synthesize THC. In 1980, Marinol, a synthetic version of THC was tested on cancer patients in San Francisco. The result showed a safe and effective medication that benefitted the patients, which resulted in its approval and registration in 1985. Possession of marijuana for personal use would no longer be an offense, but marijuana possessed in public would remain contraband subject to summary seizure and forfeiture. Casual distribution of small amounts of marijuana for no remuneration, or insignificant remuneration not involving profit would no longer be an offense. In 1976, marijuana was decriminalized in the Netherlands, they adopted a system of 'coffee shops' where the purchase of small quantities of cannabis by adults was informally tolerated and was then formally permitted in shops that were licensed. The same year, a patient (Robert Randall) used cannabis for the glaucoma that had afflicted him for long. The Federal Judge James Washington ruled Randall's use of marijuana constituted a 'medical necessity'. In 1978, New Mexico passed the first state law recognizing the medical value of marijuana. Over the next few years, more than 30 states passed similar legislation.

In 1990, Miles Herkenham and his research team discovered the cannabinoid receptor system. The discovery helps scientists understand the pharmacological effects of cannabinoids, which occur when the THC in marijuana binds with the cannabinoid receptors in the brain. One year later (1991), medical marijuana initiative was passed in San Francisco. Then 1992 saw the discovery, by Drs William Devane and Lumir Hanus, of brain's first endogenous cannabinoid- the brain's natural version of THC. This endocannabinoid system in the brain is also believed to help mediate emotions, consolidate memory, and coordinate movement. In Nov. 5, 1996 California became the first state to legalize medical marijuana; it permits patients and their primary caregivers, with a physician's recommendation, to possess and cultivate marijuana for

the treatment of AIDS, cancer, muscular spasticity, migraines, and several other disorders; it also protects them from punishment if they recommend marijuana to their patients. By 1998, United Kingdom legitimized the use of medical marijuana. In the words of Lord Perry of Walton, Chairman of the inquiry: 'We have seen enough evidence to convince us that a doctor might legitimately want to prescribe cannabis to relieve pain, or the symptoms of multiple sclerosis (MS); and that the criminal law ought not to stand in the way. Above all, it would show compassion to patients who currently risk prosecution to get help.' Researchers concluded on the multiple medicinal values of Cannabis and its application in hospitals.<sup>19,20,21</sup>

The medical necessity became overwhelming that the Canadian Health Authority in 1999, stepped in to benefit from the initiative. They provided \$1.5 million for research in the medical use of marijuana. By 2003, the first Canadian patient- Jari Dvorak, who had HIV/AIDS, received government-grown marijuana. Qualified patients are approved through Health Canada, and the marijuana is distributed through the patients' physicians.<sup>22</sup> The US received a patent for the therapeutic use of cannabinoids as antioxidants and neuroprotectants- Alzheimer, in 2007. The General Assembly of the Presbyterian Church (USA) in 2006, supported access to medical marijuana for people who have a doctor's recommendation. FDA approved the first marijuana-based drug (cannabidiol) in 2018, used in the treatment of seizures. Thailand's parliament on 25th December, 2015 voted to amend the Narcotic Act of 1979 to allow medical marijuana use and research, the first country in Southeast Asian to legalize marijuana in any form. This further motivated other countries to invest in research in CBD. USA devoted \$3M on CBD and pain. By 2020, the United Nations Commission reclassified and voted in favor of use of medical marijuana- though at the said convention, Nigeria voted against.

### **A look at Nigeria**

In Nigeria, the use of marijuana (*Cannabis sativa*), also known by other names like Indian hemp, weed, igbo, weewee or ganja, is common place irrespective of restrictive regulations and it is even celebrated socially even in the entertainment industry where there are many songs talking about weed and other drugs in celebratory tones and music videos of people smoking it. And this is not a new phenomenon in the music industry; it had been a fad for decades. People now openly smoke cannabis as a form of recreation, making it appear like an acceptable

recreational drug socially in Nigeria in spite of the law. A 2018 report by the United Nations Office on Drug and Crime (UNODC) confirmed this when it ranked Nigeria as the world's highest consumers of cannabis, revealing marijuana to be the most consumed "drug" in Nigeria as it was being consumed by an estimated 10.8 % of the population then. This translates to 10.6 million Nigerians who in one way or another indulged in the use of cannabis. Wikipedia further reiterated this when it reported that cannabis in Nigeria is illegal, yet the country is a major source of West African-grown cannabis as it is widely grown across the States of the federation, including Ondo State, Edo State, Delta State, Osun State, Oyo State and Ogun State.<sup>23</sup>

### **Indian hemp act (of Nigeria)**

Before the enactment of the Indian Hemp Act 24, the use of cannabis in Nigeria was limited by a series of statutes, including the 1935 Dangerous Drugs Ordinance, when Nigeria was still under British rule. But after independence in 1960, the country promulgated an Indian Hemp Decree which was signed into law on March 31, 1966. The law was amended in 1975 and 1984 respectively. While the 1966 decree recommended death penalty for hemp cultivation, that of 1975 decree removed the threat of capital punishment, and in its 1984 amendment increased penalties and jail terms.

The Indian Hemp Act provides to make the planting, cultivation and importation of Indian hemp an offence and to make provisions for other related matters. By virtue of the Act, Indian hemp means: any plant or part of a plant of the genus *cannabis*, the separated resin, whether crude or purified, obtained from any plant of the genus *cannabis* and any preparation containing any such resin by whatever name that plant, part, resin or preparation may be called. The law provides that any person who knowingly plants or cultivates any plant of the genus *cannabis* shall be guilty of an offence and liable on conviction to be sentenced either to death or to imprisonment for a term of not less than twenty-one years and anyone found guilty of the unlawful importation or sale of Indian hemp shall be liable on conviction to be sentenced to imprisonment for a term of not less than twenty-one years.

Indian hemp smokers are not exempted from the law; any person who smokes any Indian hemp or knowingly has any Indian hemp in his possession, shall be guilty of an offence and liable on conviction to imprisonment for a term of not less than four years without the option of a

fine, if however, such person is not more than seventeen years of age, he shall, in addition to twenty-one strokes of the cane, be sentenced to two years in a borstal or such similar institution or to a fine of N200.<sup>24</sup> The law further provides that any person who, knowingly has in his possession, any pipe or other utensil for use in connection with the smoking of Indian hemp shall be guilty of an offence and liable on conviction to imprisonment for a term of not less than five years. Owners who also permit their properties to be used for the smoking, sale or preparation of Indian Hemp shall be guilty of an offence and liable on conviction to imprisonment for a term of not less than 10 years without the option of a fine and anyone who assists in the commission of the offence shall be guilty of an offence and liable on conviction to imprisonment for a term of not less than 10 years, without the option of a fine. And where any person is convicted of any offence under this Act, all articles including any vehicle or vessel used by him in connection with the offence shall be forfeited and where any such forfeited article is a pipe or other utensil for use in connection with the smoking of Indian hemp, the court may order it to be destroyed. The Act also provides for corporal punishment of offences committed under this Act.

However, anyone who imports or sells marijuana for medical reasons is exempted from this law while anyone found guilty of the exportation of Indian hemp shall be guilty of an offence, and liable on conviction to imprisonment for a term of not less than twenty-one years. The medical reasons in the Act was not clearly or expressly stated, but as it is, medical marijuana use is illegal as it was rejected in 2023 by the National Assembly.

In summary, Medical marijuana is illegal in Nigeria. The country's constitution doesn't recognize cannabis as a medicine, and there's no legal pathway for patients to access it. According to the Dangerous Drugs Act and the Indian Hemp Act, possession, use, and cultivation of cannabis are strictly prohibited, with penalties ranging from imprisonment to fines. However, several individuals and groups have advocated for decriminalizing or even exploiting cannabis for economic gain, citing its potential benefits- especially the health components, but the existing laws must be changed to accommodate this.

Approaching from the economic perspective,<sup>25</sup> Nigeria's potential economic gain from medical marijuana is substantial, considering the country's favorable climate,

affordable land, and low-cost labor. According to another study,<sup>26</sup> this emanates from:

**Market Size:** Nigeria's market share of the cannabis industry could reach \$3.7 billion, surpassing the \$458 million the government attracted in 2022.

**Job Creation:** Legalizing medical cannabis could create over 130,000 sustainable jobs, similar to South Africa's target.

**Revenue Generation:** The global medical cannabis industry is projected to reach \$197 billion by 2028, offering immense opportunities for research, development, and economic growth.

**Foreign Exchange Savings:** By cultivating cannabis locally, Nigeria can reduce its reliance on imported cannabis products, saving on foreign exchange.

**Crime Reduction:** Regulating the medical cannabis industry can help control the black market, reducing crime and improving public safety.

**Economic Growth:** Medical cannabis can position Nigeria as a major player in the global market, driving economic growth and innovation.

## CONCLUSION

The controversies surrounding medical marijuana reflect the tension between scientific evidence, societal values, and legal frameworks. While numerous studies highlight its potential benefits in managing chronic pain, epilepsy, and chemotherapy-induced nausea, concerns persist about addiction, misuse, and long-term cognitive effects. Ethical debates also arise regarding its regulation, accessibility, and potential to encourage recreational use. Policymakers, researchers, and healthcare professionals must therefore strike a delicate balance: promoting rigorous research, ensuring patient safety, and crafting clear legislation that harnesses the therapeutic promise of cannabis while minimizing public health risks and moral apprehensions associated with its use.

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